

Listing of the Claims:

Claim 1. (Canceled)

Claim 2. (Original) A method of optimizing patterns which are applied to a running web of wrapping material for smokers' products by a cyclically operated paster, comprising the steps of:

making discrete images of successive patterns on the running web;

forming a composite image of the images of at least some of the patterns applied during a cycle of the paster;

comparing the composite image with a reference image; and

initiating changes of the discrete patterns when the comparing step indicates a departure of composite image from the reference image.

Claim 3. (Original) The method of claim 2, wherein said pattern applying step includes advancing the web from the paster at a variable angle and said initiating step includes changing said angle when the composite image departs from the reference image.

Claim 4. (Original) The method of claim 3, further comprising the steps of comparing the composite image with at least one additional reference image which is indicative of a departure of said angle from an optimal angle in a first direction, and changing said angle in a second direction counter to said first direction when the composite image departs from the at least one additional reference image in said first direction.

Claim 5. (Original) The method of claim 3, further comprising the steps of comparing the composite image with a first additional reference image which is indicative of a departure of said angle from an optimal angle in a first direction, comparing the composite image with a second additional reference image which is indicative of a departure of said angle from said optimal angle in a second direction counter to said first direction, increasing said angle when the composite image departs from said reference image in a direction toward said first additional reference image, and reducing said angle when the composite image departs from the reference image in a direction toward said second additional reference image.

Claim 6. (Original) The method of claim 5, wherein the departure in said first direction is indicative of an angle smaller than the angle when the composite image matches said reference image and the departure in said second direction is indicative of an angle greater than the angle when the composite image matches said reference image.

Claim 7. (Canceled).

Claim 8. (Currently Amended) ~~The apparatus of claim 7~~
Apparatus for monitoring patterns which are applied to a running web of
wrapping material for smokers' products, comprising:
an associated paster arranged to cyclically apply adhesive patterns to
successive sections of the running web;

a camera arranged to make pictures of successive groups of patterns;
means for evaluating said pictures, including means for making
composite images of patterns applied to the running web during a portion at least
of each cycle of said paster;
means for displaying said images;

~~further comprising~~ first signal generating means arranged to furnish to said camera a series of first signals at a first frequency, said first signals denoting the rate of application of patterns by said paster[[,]]; and

second signal generating means arranged to transmit to said camera a series of second signals at a second frequency higher than said first frequency, said evaluating means being operatively connected with said camera and said camera being arranged to make a picture substantially in response to each second signal and to transmit the picture to said evaluating means, said evaluating means being arranged to make an image from at least some of the pictures transmitted thereto between successive first signals.

Claim 9. (Original) The apparatus of claim 8, wherein said paster comprises a paste applicator including one of a rotary valve and a rotary roller, said first signal generating means being operatively connected with said paste applicator in such a way that the latter generates a first signal at the start of each full revolution of said paste applicator.

Claim 10. (Currently Amended) The apparatus of claim 7 8, wherein said camera is a linear scanning camera arranged to make linear pictures of the patterns on the web.

Claim 11. (Currently Amended) The apparatus of claim 7 8, further comprising a source of linear radiation arranged to direct radiation upon those successive patterns of the web which are imaged by said camera, said camera having an objective oriented substantially at a glancing angle to the plane of the pattern being imaged by the camera.

Claim 12. (Currently Amended) The apparatus of claim 7 8, further comprising means for advancing the web in a predetermined direction along a predetermined path, means for severing the web downstream of said paster - as seen in said direction - at a variable frequency to subdivide the web into a series of uniting bands, means for generating signals at a frequency corresponding to the frequency at which the web is severed by said severing means, and means for generating and integrating into the composite images information derived from the frequency of said signals, said information including control markers denoting the cuts made in the web by said severing means.

Claim 13. (Currently Amended) The apparatus of claim 7 8, further comprising first signal generating means arranged to furnish to said camera a series of first signals at a first frequency, said first signals denoting the rate of

application of patterns by said paster, second signal generating means arranged to transmit to said camera a series of second signals at a second frequency higher than said first frequency, said evaluating means being operatively connected with said camera and said camera being arranged to make a picture substantially in response to each second signal and to transmit the picture to said evaluating means, said evaluating means being arranged to make an image from at least some of the pictures transmitted thereto between successive; first signals and further comprising means for advancing the web in a predetermined direction along a predetermined path, means for severing the web downstream of said paster - as seen in said direction - at a variable frequency to subdivide the web into a series of uniting; bands, means for generating third signals at a frequency corresponding to the frequency at which the web is severed by said severing means, and means for generating and integrating into the composite images information derived from the frequency of said third signals, said information including control markers denoting the cuts made in the web by said severing means.

Claim 14. (Original) Apparatus for optimizing adhesive patterns which are applied seriatim to a running web of wrapping material for smokers' products by a cyclically operated paster, comprising:

a camera arranged to make pictures of successive series of patterns, each of said series including at least some patterns applied during a cycle of the paster;

means for evaluating said pictures and for producing images of pictures of said successive series of patterns; and

means for storing a reference image, said evaluating means including means for comparing said images of patterns with said reference image and means for altering the patterns being applied to the web by said paster when the images of said patterns depart from said reference image.

Claim 15. (Original) The apparatus of claim 14, further comprising means for advancing the web in a predetermined direction and along a predetermined path extending past said paster and thereupon past said camera, said altering means comprising an adjustable deflecting roller engaging the web downstream of said paster and upstream of said camera, as seen in said direction.

Claim 16. (Original) The apparatus of claim 15, wherein said paster includes a portion which cooperates with said roller to change the orientation of successive increments of the web in response to adjustments of said roller and to thus change the patterns being applied to the web by said paster.

Claim 17. (Original) The apparatus of claim 14, wherein said storing means is arranged to further store at least one additional reference image indicative of a departure of the images of said patterns from said first mentioned reference image in at least one of two directions, said evaluating means further comprising means for comparing said images of patterns with said at least one additional reference image and said altering means being further arranged to alter said patterns when the images of said patterns depart from said additional reference image.

Claim 18. (Original) The apparatus of claim 17, wherein said altering means is arranged to change the orientation of the web upstream of said camera in one direction when the images of said patterns depart from said additional reference image in another direction counter to said one direction.

Claim 19. (Currently Amended) The apparatus of claim 14, wherein said storing means is arranged to further store first and second additional reference images respectively indicating ~~departures~~ departures of the images of said patterns from said first mentioned reference image in a first direction and a second direction counter to said first direction, said evaluating means further including means for comparing said images of said patterns with said additional reference images and said altering means being arranged to alter the patterns being applied to the web when the images of said patterns depart from said additional reference images.

Claim 20. (Original) The apparatus of claim 19, wherein said altering means includes means for changing the orientation of the web between said paster and said camera in one direction when the images of patterns being applied to the web depart from one of said additional reference images and for changing the orientation of the web between said paster and said camera in another direction counter to said one direction when the images of patterns being applied to the web depart from the other of said additional reference images.